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EXAMINER
CHO, UN C

ART UNIT	PAPER NUMBER
2682	3

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,826

Applicant(s)

HOSONO, SHIZU

Examiner

Un C Cho

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 5, 7, 11, 14, 15, 17, 18, 20, 24, 27, 28, 30, 31, 33, 37, 40, 41, 43, 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Reichelt (US 6,345,180).

Regarding claim 1, the admitted prior art teaches receiving means for receiving a radio signal, judging means for judging whether said apparatus is capable of determining its position information. However, the admitted prior art fails to specifically disclose setting means for setting a response hold state when said apparatus is incapable of determining its position information (Admitted prior art, Page 2, lines 1 – 5).

On the other hand, Reichelt teaches setting means for setting a response hold state (stop sending periodic location update information) when the MS is incapable of determining its position information (low power state) (Reichelt, Col. 8, lines 31 – 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Reichelt to the system of the admitted prior art in order to provide an improve system, method and apparatus for monitoring power levels in a battery operated device to

prevent the reception of calls, either by means located in the mobile terminal; by means located at the network level; or both, when the power level of the mobile device is at a predetermined emergency power level.

Regarding claim 2, the admitted prior art as applied to claim 1 above differs from claim 2 in the present invention in that, the admitted prior art does not specifically disclose sending means for sending a message to a sender of said radio signal.

However, Reichelt disclose sending means for sending a message to a sender of the radio signal (Reichelt, Col. 8, lines 14 – 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Reichelt to the system of the admitted prior art in order to provide an improve system, method and apparatus for monitoring power levels in a battery operated device to prevent the reception of calls, either by means located in the mobile terminal; by means located at the network level; or both, when the power level of the mobile device is at a predetermined emergency power level.

Regarding claim 4, the admitted prior art as applied to claim 2 above differs from claim 4 in the present invention in that, the admitted prior art does not specifically disclose storing means for storing said message.

However, Reichelt discloses storing means (memory) for storing the message (Reichelt, Col. 7, lines 25 – 40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the

technique of Reichelt to the system of the admitted prior art in order to provide an improve system, method and apparatus for monitoring power levels in a battery operated device to prevent the reception of calls, either by means located in the mobile terminal; by means located at the network level; or both, when the power level of the mobile device is at a predetermined emergency power level.

Regarding claim 5, the admitted prior art as applied to claim 2 above differs from claim 5 in the present invention in that, the admitted prior art does not specifically disclose setting means sets a response hold state and said sending means sends said message even if said radio apparatus is capable of determining its position information.

However, Reichelt disclose setting means for setting a response hold state (stop sending periodic location update information) (Reichelt, Col. 8, lines 31 – 44) and sending means for sending the message even if the MS is capable of determining its position information (Reichelt, Col. 8, lines 14 – 18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Reichelt to the system of the admitted prior art in order to provide an improve system, method and apparatus for monitoring power levels in a battery operated device to prevent the reception of calls, either by means located in the mobile terminal; by means located at the network level; or both, when the power level of the mobile device is at a predetermined emergency power level.

Regarding claim 7, the admitted prior art as applied to claim 2 above differs from claim 7 in the present invention in that, the admitted prior art does not specifically disclose message indicating that said radio apparatus is incapable of determining its position information.

However, Reichelt disclose that the message indicates that the radio apparatus is incapable of determining its position information (incapable of performing location update because of low power state; Col. 8, lines 14 – 18 and 31 – 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Reichelt to the system of the admitted prior art in order to provide an improve system, method and apparatus for monitoring power levels in a battery operated device to prevent the reception of calls, either by means located in the mobile terminal; by means located at the network level; or both, when the power level of the mobile device is at a predetermined emergency power level.

Regarding claim 11, the admitted prior art as applied to claim 1 above differs from claim 11 in the present invention in that, the admitted prior art does not specifically disclose that the radio apparatus is a portable telephone.

However, Reichelt disclose a portable telephone (Fig. 1B; Col. 5, lines 57 – 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Reichelt to the system of the admitted prior art in order to provide an improve system, method and apparatus for monitoring power levels in a battery operated device to prevent

the reception of calls, either by means located in the mobile terminal; by means located at the network level; or both, when the power level of the mobile device is at a predetermined emergency power level.

Regarding claim 14, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 15, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 17, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 18, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 20, the claim is interpreted and rejected for the same reason as set forth in claim 7.

Regarding claim 24, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Regarding claim 27, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 28, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 30, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 31, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 33, the claim is interpreted and rejected for the same reason as set forth in claim 7.

Regarding claim 37, the claim is interpreted and rejected for the same reason as set forth in claim 11.

Regarding claim 40, the claim is interpreted and rejected for the same reason as set forth in claim 1.

Regarding claim 41, the claim is interpreted and rejected for the same reason as set forth in claim 2.

Regarding claim 43, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 44, the claim is interpreted and rejected for the same reason as set forth in claim 5.

Regarding claim 46, the claim is interpreted and rejected for the same reason as set forth in claim 11.

3. Claims 3, 8, 16, 21, 29, 34 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Reichelt as applied to claim 1 above, and further in view of Havinis et al. (US 6,311,069).

Regarding claim 3, the admitted prior art in view of Reichelt as applied to claim 2 above differs from claim 3 in the present invention in that, the admitted

prior art in view of Reichelt does not specifically disclose checking means for checking whether said radio signal includes information indicating a search request for determining the position information of said radio apparatus.

However, Havinis teaches checking means for checking whether the radio signal (position request) includes information indicating a search request for determining the position information of the radio apparatus (MS, 20 of Fig. 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Havinis to the modified system of the admitted prior art and Reichelt in order to provide a notification to the mobile subscriber that he/she is being positioned in order to enhance the privacy of the mobile subscriber.

Regarding claim 8, the admitted prior art in view of Reichelt as applied to claim 3 above differs from claim 8 in the present invention in that, the admitted prior art in view of Reichelt does not specifically disclose message indicating that the radio apparatus rejects said request to determine its position information.

However, Havinis disclose that the message indicates that the radio apparatus rejects the request (Havinis, Col. 6, lines 14 – 22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Havinis to the modified system of the admitted prior art and Reichelt in order to provide a notification to the mobile subscriber that he/she is being positioned in order to enhance the privacy of the mobile subscriber.

Regarding claim 16, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 21, the claim is interpreted and rejected for the same reason as set forth in claim 8.

Regarding claim 29, the claim is interpreted and rejected for the same reason as set forth in claim 3.

Regarding claim 34, the claim is interpreted and rejected for the same reason as set forth in claim 8.

Regarding claim 42, the claim is interpreted and rejected for the same reason as set forth in claim 3.

4. Claims 6, 19, 32 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Reichelt as applied to claim 1 above, and further in view of Linkola (US 6,516,190).

Regarding claim 6, the admitted prior art in view of Reichelt as applied to claim 1 above differs from claim 6 in the present invention in that, the admitted prior art in view of Reichelt does not specifically disclose positioning means for determining its position information and sending means for sending the result of said position means to a sender of said radio signal.

However, Linkola teaches positioning means for determining its position information (MS has a locator object whose function is to determine the current location of the MS, 21 of Fig. 3; Col. 6, lines 4 – 15) and sending means for

sending the result of the position to a sender (PLMN having a billing object which receives the request, Fig. 2) of the radio signal (Col. 6, lines 16 – 51). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Linkola to the modified system of the admitted prior art and Reichelt in order to provide a system in which the area of a specially priced call is not dependent on the cell coverage area but may instead consist of any geographic area.

Regarding claim 19, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 32, the claim is interpreted and rejected for the same reason as set forth in claim 6.

Regarding claim 45, the claim is interpreted and rejected for the same reason as set forth in claim 6.

5. Claims 9, 22 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Reichelt as applied to claim 2 above, and further in view of Ito (US 6,347,278).

Regarding claim 9, the admitted prior art in view of Reichelt as applied to claim 2 above differs from claim 9 in the present invention in that, the admitted prior art in view of Reichelt does not specifically disclose that the message is the latest positioning data of a plurality of radio apparatus positioning data.

However, Ito teaches transmitting the latest location information among all the already-extracted location information in response to the request (Ito, Col. 9, lines 35 – 38). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Ito to the modified system of the admitted prior art and Reichelt in order to provide a navigation system which is capable of suppressing the frequency of communications between a mobile terminal and a server into a minimum level and carrying out the navigation function using an on-demand system.

Regarding claim 22, the claim is interpreted and rejected for the same reason as set forth in claim 9.

Regarding claim 35, the claim is interpreted and rejected for the same reason as set forth in claim 9.

6. Claims 10, 23 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Reichelt as applied to claim 2 above, and further in view of Totaro et al. (US 6,259,921).

Regarding claim 10, the admitted prior art in view of Reichelt as applied to claim 2 above differs from claim 10 in the present invention in that, the admitted prior art in view of Reichelt does not specifically disclose that the message is the position information of a base station located closest to the radio apparatus.

However, Totaro teaches that the terminal updates the location as being in the coverage sub-area of the base station that is closest to the terminal (4 of Fig.

1; Col. 5, lines 34 – 40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Totaro to the modified system of the admitted prior art and Reichelt in order to minimize or even reduce the routing distance through the terrestrial network of a call set up between a mobile first terminal and a second terminal that can be a mobile terminal or a fixed terminal, a location updating step is provided for updating the location of the first terminal as being in the coverage sub-area of that base station which is closest to the second terminal.

Regarding claim 23, the claim is interpreted and rejected for the same reason as set forth in claim 10.

Regarding claim 36, the claim is interpreted and rejected for the same reason as set forth in claim 10.

7. Claims 12, 13, 25, 26, 38, 39, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Reichelt as applied to claim 4 above, and further in view of McCrady et al. (US 6,453,168).

Regarding claim 12, the admitted prior art in view of Reichelt as applied to claim 4 above differs from claim 12 in the present invention in that, the admitted prior art in view of Reichelt does not specifically disclose that the radio apparatus receives radio signals from a plurality of senders and said storing means stores a message for each one of the plurality of senders.

However, McCrady teaches that the radio apparatus (Master Radio, 12 of Fig. 1) receives radio signals from a plurality of senders (REF Radio1 – 4, 14, 16, 18 and 20 of Fig. 1; Col. 7, lines 14 – 19) and storing means (Buffer, 90 of Fig. 7) for storing message for each of the plurality of senders (McCrady, Col. 13, lines 15 – 23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of McCrady to the modified system of the admitted prior art and Reichelt in order to rapidly, reliably and accurately determine the three-dimensional position of a mobile communication device in a variety of environments, including urban areas and inside buildings where multipath interference can be great.

Regarding claim 12, the admitted prior art in view of Reichelt as applied to claim 4 above differs from claim 13 in the present invention in that, the admitted prior art in view of Reichelt does not specifically disclose that the message stored in said storing means is different from another message stored in said storing means.

However, McCrady teach that at least one message stored in the buffer is different from another message stored in the buffer (McCrady, Col. 13, lines 23 – 47). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of McCrady to the modified system of the admitted prior art and Reichelt in order to rapidly, reliably and accurately determine the three-dimensional position of a mobile communication

device in a variety of environments, including urban areas and inside buildings where multipath interference can be great.

Regarding claim 25, the claim is interpreted and rejected for the same reason as set forth in claim 12.

Regarding claim 26, the claim is interpreted and rejected for the same reason as set forth in claim 13.

Regarding claim 38, the claim is interpreted and rejected for the same reason as set forth in claim 12.

Regarding claim 39, the claim is interpreted and rejected for the same reason as set forth in claim 13.

Regarding claim 47, the claim is interpreted and rejected for the same reason as set forth in claim 12.

Regarding claim 48, the claim is interpreted and rejected for the same reason as set forth in claim 13.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nowak et al. (US 6,757,545) discloses a system and method for managing the provisioning of location information on a mobile communications unit.

Steer (US 6,643,517) discloses a method to protect against improper operation of mobile radios by making use of a location technique and knowledge of the mobile's

location to determine if the mobile is inside a protected region and thus needs to constrain its operation.

Nohara et al. (US 6,546,258) discloses a communication apparatus for communicating with one base station among a plurality of base stations is provided with a present position detecting device for detecting a present position of the communication apparatus and outputting present position information indicative of the detected present position.

Hamrick et al. (US 6,356,841) discloses a management system using GPS receivers for tracking remote units from a central office and quickly and conveniently determining if those remote units have carried from a set of predetermined parameters of operation.

Moles et al. (US 6,505,048) discloses a wireless mobile station of the type having a position locating system capable of determining the location of the wireless mobile station.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C Cho whose telephone number is (703)305-8725. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703)308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho
Examiner
Art Unit 2682

UC 8/19/04



VIVIAN CHIN
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8/20/04